PTO/SB/17 (10-03)

FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT | ($) 130.00

Complete if Known	
Application Number	10/618,433
Filing Date	July 10, 2003
First Named Inventor	TAKAOKA, Nobumitsu
Examiner Name	Unassigned
Art Unit	2186
Attorney Docket No.	16869N-085000US

METHOD OF PAYMENT *(check all that apply)*

☐ Check ☐ Credit Card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number: 20-1430

Deposit Account Name: Townsend and Townsend and Crew LLP

The Director is authorized to: *(check all that apply)*

☒ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) or any underpayment of fee(s)

☐ Charge fee(s) indicated below, **except for the filing fee** to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($)0.00

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

			Extra Claims		Fee from below	Fee Paid
Total Claims		-** =		X		=
Independent Claims		-** =		X		=
Multiple Dependent				X		=

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($)0.00

***or number previously paid, if greater; For Reissues, see above*

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive – unavoidable	
1453	1,330	2453	665	Petition to revive – unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	130
1807	50	1807	50	Petitions related to provisional applications	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) ———————————————

*Reduced by Basic Filing Fee Paid **SUBTOTAL (3)** ($)130.00

SUBMITTED BY *Complete (if applicable)*

Name (Print/Type)	Chun-Pok Leung	*Registration No. (Attorney/Agent)*	41,405	*Telephone*	650-326-2400
Signature				*Date*	August 23, 2004

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60291665 v1

PATENT
Attorney Docket No.: 16869N-085000US
Client Ref. No.: NT1184US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

NOBUMITSU TAKAOKA et al.

Application No.: 10/618,433

Filed: July 10, 2003

For: COMPUTER MANAGEMENT SYSTEM AND MANAGEMENT PROGRAM

Customer No.: 20350

Examiner: Unassigned

Technology Center/Art Unit: 2186

Confirmation No.: 5607

PETITION TO MAKE SPECIAL FOR NEW APPLICATION UNDER M.P.E.P. § 708.02, VIII & 37 C.F.R. § 1.102(d)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a petition to make special the above-identified application under MPEP § 708.02, VIII & 37 C.F.R. § 1.102(d). The application has not received any examination by an Examiner.

(a) The Commissioner is authorized to charge the petition fee of $130 under 37 C.F.R. § 1.17(i) and any other fees associated with this paper to Deposit Account 20-1430.

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(b) All the claims are believed to be directed to a single invention. If the Office determines that all the claims presented are not obviously directed to a single invention, then Applicants will make an election without traverse as a prerequisite to the grant of special status.

(c) Pre-examination searches were made of U.S. issued patents, including a classification search, a computer database search, and a keyword search. The searches were performed on or around June 10, 2004, and were conducted by a professional search firm, Kramer & Amado, P.C. The classification search covered Classes 345 (subclass 736), 709 (subclasses 225 and 230), 710 (subclass 15), and 713 (subclass 100). The computer database search was conducted on the USPTO systems EAST and WEST. The keyword search was conducted in Classes 709 (subclasses 223 and 224), 710 (subclasses 7 and 8), and 713 (subclass 1). The inventors further provided a reference considered most closely related to the subject matter of the present application (see reference #4 below), which was cited in the Information Disclosure Statement filed with the application on July 10, 2003.

(d) The following references, copies of which are attached herewith, are deemed most closely related to the subject matter encompassed by the claims:

(1) U.S. Patent Publication No. 2004/0024870 A1;

(2) U.S. Patent Publication No. 2003/0088683 A1;

(3) U.S. Patent No. 6,425,015 B1; and

(4) U.S. Patent No. 6,253,240 B1.

(e) Set forth below is a detailed discussion of references which points out with particularity how the claimed subject matter is distinguishable over the references.

A. Claimed Embodiments of the Present Invention

The claimed embodiments relate to a method of visualizing the connection relationships between a storage system and an object computer that is an object of management which is implemented in a management computer. The present technique uses an identifier inherent to a data processing device to grasp a connection relationship, and makes it possible to visualize the connection relationships among a plurality of devices interconnected over a storage network without the need to implement a connection information acquiring unit in an object computer.

Independent claim 1 recites a computer management system having an object computer, a storage system in which data to be communicated to the object computer is stored, and a management computer that manages the storage system and object computer. The storage system comprises an acquisition unit that acquires first connection information, which contains a communication port identifier of the object computer, and a communication port identifier assigned to the communication port of the storage system, from the object computer; and a communication unit that transmits the first connection information to the management computer. The management computer comprises a communication unit that receives the first connection information from the storage system; and a display that uses an output screen to visualize connection relationships between the storage system and computer on the basis of the first connection information.

Independent claim 8 recites a storage system which has a plurality of communication ports and in which data to be communicated to an object computer through one of the communication ports is stored. The storage system comprises an acquisition unit that acquires first connection information, which contains a communication port identifier of the object computer, and a communication port identifier assigned to the communication port of the storage system, from the object computer; and a communication unit that transmits the first connection information to a management computer.

Independent claim 9 recites a management computer for managing an object computer and a storage system in which data to be communicated to the object computer is stored. The management computer comprises a communication unit that receives first

connection information, which contains a communication port identifier of the object computer, and a communication port identifier assigned to the communication port of the storage system, from the storage system; and a display that uses an output screen thereof to visualize connection relationships between the storage system and the object computer on the basis of the first connection information.

Independent claim 10 recites a management method for managing connection relationships between an object computer and a storage system in which data to be communicated to the object computer is stored. The method comprises acquiring first connection information, which contains a communication port identifier of the object computer, and a communication port identifier assigned to the communication port of the storage system, from the object computer; and transmitting the first connection information to a management computer.

Independent claim 11 recites a management method for managing connection relationships between an object computer and a storage system in which data to be communicated to the object computer is stored. The method comprises receiving first connection information, which contains a communication port identifier of the object computer, and a communication port identifier assigned to the communication port of the storage system, from the storage system; and using an output screen to visualize the connection relationships between the storage system and the object computer on the basis of the first connection information.

Independent claim 12 recites management software for managing connection relationships between an object computer and a storage system in which data to be communicated to the object computer is stored. The management software allows the storage system to act as means for acquiring first connection information, which contains a communication port identifier of the object computer, and a communication port identifier assigned to the communication port of the storage system, from the object computer; and means for transmitting the first connection information to a management computer.

Independent claim 13 recites a computer readable storage medium having a management program for managing connection relationships between an object computer and

a storage system in which data to be communicated to the object computer is stored. The management program comprises code for receiving first connection information, which contains a communication port identifier of the object computer, and a communication port identifier assigned to the communication port of the storage system, from the storage system; and code for using an output screen to visualize the connection relationships between the storage system and the object computer on the basis of the first connection information.

One benefit that may be derived is that the development of an agent program is not required, and the associated cost can be avoided.

B. Discussion of the References

None of the following references disclose or suggest a storage system that acquires from the object computer first connection information, which contains a communication port identifier of the object computer and a communication port identifier assigned to the communication port of the storage system, and provides the first connection information to a management computer. Nor do they teach using an output screen to visualize the connection relationships between the storage system and the object computer on the basis of the first connection information.

1. U.S. Patent Publication No. 2004/0024870 A1

This reference discloses a storage network system including computers, storage systems, connection devices that control connection relations between the computers and the storage system, and a managing device that manages the computers, the storage system, and the connection devices. In Fig. 2, the managing computer 201 connects to computers A and B, and storage apparatus A and B. The managing device includes a control section that specifies connection ports of the computers, the storage system, and the connection devices that compose the storage network system. There is no acquisition from an object computer of first connection information which contains a communication port identifier of the object computer and a communication port identifier assigned to the communication port of the storage system, and transmission of the first connection information to the management computer.

2. U.S. Patent Publication No. 2003/0088683 A1

This reference discloses a management display method according to each type of interfaces and devices provided in an environment where host computers are interconnected with storage apparatuses through plural types of interfaces. The management host computer includes a display apparatus and allows a user to select a physical view for displaying a physical topology between each host and storage subsystems or a logical view for displaying a connecting relation between the devices of the storage subsystem and each host computer. The management host computer 2 operates to collect the information of the Fibre channel interface and the Ethernet interface and the information about an access limitation of each device, included in each host computer and storage subsystem and then to display the connecting relation according to the display method selected by the user, based on the collected information. In this system, the host 1 includes the software called an agent 11 which serves to communicate with the management host 2. The management host 2 includes a manager 21 through which information is transferred with each agent 11. The information about the apparatus is collected and managed from each agent 11 of the host 1 and the management agent 514 of the storage 5 by the manager 21 of the management host 2. The management host 2 collects information from the host 1 and the storage 5 or the Ethernet switch 3 or the Fibre channel switch 4, and serves to display a connecting relation (topology) between the host 1 and the storage 5 based on the collected information. See [0040]-[0042] and [0047].

3. U.S. Patent No. 6,425,015 B1

This reference discloses a communications apparatus for a computer network in which a plurality of network devices communicate with each other. The apparatus comprises management means being arranged to have defined therein one or more relationship between a subset of the ports in which communications passing through one of the ports should be communicated to another of the ports. The management means is arranged to transmit, together with each network communication transmitted to the interconnection means, an indication of whether the network communication has been received at a port on one of the communication devices which has a relationship with a port in another one of the communication devices, and to read the indications received together

with network communications received from the interconnection means. The reference is devoid of any disclosure of a storage system that acquires from the object computer first connection information, which contains a communication port identifier of the object computer and a communication port identifier assigned to the communication port of the storage system, and provides the first connection information to a management computer.

4. U.S. Patent No. 6,253,240 B1

This reference discloses a distributed storage management program for managing a network which comprises multiple data storage devices attached to multiple host computer systems. The management program includes a separate agent in each host, and a central manager. The agents gather data and communicate with the manager across a communication path which is independent of the storage network. The manager collates the data from different agents to produce a coherent view of the network. This system relies on agents for gathering information. As discussed in the present application, the agent program deteriorates the ability of a computer to run certain transaction software because the agent program consumes computer resources, and leads the high cost of development.

(f) In view of this petition, the Examiner is respectfully requested to issue a first Office Action at an early date.

Respectfully submitted,

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Attachments
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